

What is claimed is:

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1. An image display device, comprising:
a liquid crystal panel for displaying an RGB image;
a light source for supplying light that the liquid crystal panel needs for
5 display operation thereof; and
an optical sensor for measuring how the liquid crystal panel is emitting R, G,
and B light,

wherein lighting of the light source is controlled according to a measurement
value obtained from the optical sensor in order to correct brightness or
10 chromaticity or both of the liquid crystal panel.

2. An image display device as claimed in claim 1,

wherein a viewing angle of the optical sensor is limited and a measurement
area of the optical sensor depends on the viewing angle.

3. An image display device as claimed in claim 2,

wherein the measurement area of the optical sensor is within 10 degrees
upward, downward, leftward, and rightward of a line perpendicular to the liquid
crystal panel.

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4. An image display device as claimed in claim 1,

wherein the optical sensor has a light-sensing area at least equal to areas of
one R, one G, and one B dots added together.

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5. An image display device as claimed in claim 1,
wherein the brightness or chromaticity of the liquid crystal panel is
corrected by controlling a driving voltage or driving current of the light source.

5 6. An image display device as claimed in claim 1,
wherein the light source is a backlight provided on the back of the liquid
crystal panel.

10 7. An image display device as claimed in claim 1,
wherein the RGB image is displayed by receiving image data transmitted
from a transmitting side.

15 8. An image display device as claimed in claim 1, further comprising:
a temperature sensor for measuring surface temperature of the light source,
wherein the driving voltage or driving current of the light source is
controlled in such a way that the surface temperature of the light source is kept
constant.

20 9. An image display device as claimed in claim 8,
wherein the temperature sensor is a thermistor whose resistance varies with
the surface temperature of the light source.

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10. An image display device comprising:
a liquid crystal panel for displaying an RGB image;

a backlight for illuminating the liquid crystal panel from behind;
an optical sensor for measuring how the liquid crystal panel is emitting R, G,
and B light;

5 a signal reading circuit for converting a measurement value obtained from
the optical sensor into a current brightness value of the liquid crystal panel;

brightness setting means for permitting entry of specified brightness of the
liquid crystal panel;

converting means for converting an output of the brightness setting means
into a specified brightness value of the liquid crystal panel;

10 a calculator for calculating a difference between the current brightness value
and the specified brightness value of the liquid crystal panel;

a duty factor setting circuit for outputting a pulse signal whose duty factor
depends on an output of the calculator; and

15 an inverter for producing a driving voltage and a driving current for the
backlight according to the pulse signal;

20 wherein the brightness of the liquid crystal panel is corrected by controlling
lighting of the backlight according to the measurement value obtained from the
optical sensor.

11. An image display device as claimed in claim 10, further comprising:
optical sensors for measuring how the liquid crystal panel is emitting R, G,
and B light independently for the R, G, and B light;
a signal reading circuit for converting measurement values obtained from the
optical sensors into a current brightness value and a current chromaticity value of

the liquid crystal panel;

a thermistor whose resistance varies with surface temperature of the backlight;

a temperature reading circuit for converting the resistance of the thermistor

5 into a surface temperature value of the backlight; and

converting means for converting an output of the temperature reading circuit into a specified brightness value of the liquid crystal panel,

wherein brightness and chromaticity of the liquid crystal panel are corrected

by controlling lighting of the backlight according to the measurement values obtained from the optical sensors in such a way that the surface temperature of the backlight is kept constant.

12. An image processing device comprising:

varying means for varying how R, G, and B light is emitted to display an image on a display panel; and

a sensor for measuring how the R, G, and B light is emitted to display the image,

wherein brightness or chromaticity or both of the image is corrected by controlling the varying means according to a measurement value obtained from the sensor.